REMARKS

This application has been reviewed in light of the Office Action dated

March 24, 2010. Claims 1, 7, 8, 10, 11 and 16 are pending in the application, of which

Claims 1, 8,10, 11 and 16 are independent. Reconsideration and further examination is

respectfully requested.

Claim 8 is rejected under 35 U.S.C. § 101 as allegedly being directed to

non-statutory subject matter. Without conceding the correctness of the rejection, Claim 8

has been amended to clarify that the claimed method is performed by a processor.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the

rejection.

Claims 1, 7, 8 10 and 15 are rejected under 35 U.S.C. § 103 as being

unpatentable over U.S. Publication 2001/0013953 (Uekusa) in view of JP-9037092 (Shoji)

and further in view of U.S. Publication 2003/0026478 (Jones). Claims 11 and 16 are

rejected under 35 U.S.C. § 103 as being unpatentable over Uekusa, Shoji and Jones in

further view of U.S. Patent No. 5,812,283 (Tachibana). Reconsideration and withdrawal of

these rejections are respectfully requested.

The present claims concern correcting compressed image data based on

attributes extracted from the compressed image data either before or during decompression

of the image data. In one aspect, a feature amount of the entire image data decompressed

from JPEG-compressed image data is acquired using a histogram acquired from a DC

component of a minimum coded unit before execution of the first correction and before

execution of the second correction is completed for the entire image data and after

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processing data corresponding to a non-print region in a borderless print mode is completed. As the feature amount is acquired from the DC component obtained between the decompression of the JPEG-compressed image data, the feature amount is quickly extracted as compared with when the feature amount is extracted from image data completely restored from the JPEG-compressed image data. As a result, an image correction process applied to the entire image data decompressed from the JPEG-compressed image data may typically be more efficiently executed and use a smaller amount of memory as opposed to other image correction processes.

Turning to specific claim language, independent Claim 1 is directed to an image processing apparatus. The apparatus includes: a corrector, arranged to apply, to image data stored in a band memory or a block memory assigned to a memory area, a first correction according to a feature amount of the entire image data, and a second correction which is different from the first correction, wherein the image data is decompressed from JPEG-compressed image data; a processor, arranged to apply an image process required to print on a print medium to the image data output from the corrector; and a recorder, arranged to print an image on the print medium in a borderless print mode based on the image data output from the processor, wherein the corrector acquires the feature amount using a histogram acquired from a DC component of a minimum coded unit before execution of the first correction and before execution of the second correction is completed for the entire image data, and after a process of data corresponding to a non-print region in the borderless print mode is completed, and wherein the minimum coded unit includes the DC component and AC components which are obtained between the decompression of the JPEG-compressed image data.

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Applicants respectfully submit that the cited references, namely Uekusa, Shoji and Jones considered either alone or in combination, fail to disclose or suggest all of the features of the apparatus of Claim 1. In particular, the cited references, either alone or in combination, fail to disclose or suggest at least the features of a recorder, arranged to print an image on the print medium in a borderless print mode based on output image data and a corrector that acquires a feature amount using a histogram acquired from a DC component of a minimum coded unit before execution of a first correction and before execution of a second correction is completed for the entire image data and after processing data corresponding to a non-print region in the borderless print mode is completed.

In contrast to the present claims, Uekusa describes color balance correction as indicated in Figs. 12A to 12C. Fig. 12A indicates an ideal color solid, Fig. 12B indicates a color solid of input image data having a gray line shifted from a gray line of the ideal color solid (paragraph 0051), and Fig. 12C indicates a color solid of the image data on which the color balance correction is performed (paragraph 0053). Applicants submit that the gray line may be considered a feature amount of the image data; however, Uekusa does not disclose a borderless print mode. Therefore, Uekusa cannot possibly disclose acquiring the gray line using a histogram acquired from a DC component of a minimum coded unit before execution of a first correction and before execution of a second correction is completed for the entire image data and after processing data corresponding to a non-print region in the borderless print mode is completed.

In addition, while Jones may disclose generating a histogram of DCT coefficients analyzing coefficients corresponding to spatial frequencies (for example, DC

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coefficient and AC 3 coefficients), Jones does not disclose such processing in the context of borderless printing.

In a device in accordance with the present claims, a feature amount is needed to perform the first and second corrections; however, the feature amount of a non-print region of an image to be printed in a borderless print mode is not necessary, thus the feature amount is acquired after processing of the data of the non-print region is completed. Therefore, when the borderless print mode is performed, the feature amount using a histogram acquired from a DC component of a minimum coded unit (i) before execution of the first correction and (ii) before execution of the second correction is completed for the entire image data, and (iii) after the processing of the data corresponding to the non-print region is completed.

In a borderless print mode, a size of an image to be printed is enlarged over a size of a paper to be used in a print, and the enlarged image is printed on the paper with no blank margins. That is, when the borderless print mode is recorded, after the data of the non-print region necessary to print with no blank margins is processed, the corrector of Claim 1 acquires a feature amount from the DC components of the minimum coded units corresponding to effective regions, thus the feature amount is quickly acquired from data before the JPEG decompression is completed. As neither Uekusa nor Jones disclose or suggest a borderless printing mode, Applicants submit that any permissible combination of these references would also fail to disclose or suggest the recorder and corrector of Claim 1.

Finally, Shoji merely discloses that each area of RAM is sequentially released based on a printing state of intermediate code information of each color stored in

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each area of the RAM. As such, Shoji is not seen to cure the deficiencies of Uekusa and Jones.

In light of these deficiencies of Uekusa, Shoji and Jones, Applicants submit that independent Claim 1 is in condition for allowance and respectfully request same.

Independent Claims 8, 10, 11 and 16 are directed to a method, computer-readable medium, a printer and an inkjet printer, respectively, substantially in accordance with the apparatus of Claim 1. Accordingly, Applicants submit that Claims 8, 10, 11 and 16 are also in condition for allowance and respectfully requests same.

The other pending claims in this application are each dependent from the independent claims discussed above and are therefore believed allowable for the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

CONCLUSION

The Director is authorized to charge the requisite $810.00 fee or any deficiency therein, or to credit any overpayment, to Deposit Account No. 50-3939.

No claim fees are believed due; however, should it be determined that additional claim fees are required, the Director is hereby authorized to charge such fees to Deposit Account 06-1205.

Applicant's undersigned attorney may be reached in our Costa Mesa, CA office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted

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